

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently Amended) A method for improving data processing in connection with a database having restrictions therein, said method comprising:

defining a dimension comprising a plurality of attributes;

assigning each attribute to a respective column of said database having restrictions therein on each attribute;

defining relationships between said attributes, wherein said relationships are not subject to said attribute restrictions placed on said database;

defining new relationships between said attributes, wherein:

said new relationships are not subject to attribute restrictions placed on the database; and

said new relationships modify at least one relationship between said attributes;  
and;

accessing said database via said dimension.

2. (Canceled)

3. (Previously Presented) A method in accordance with claim 1, further comprising:

defining at least one hierarchy comprising a sequence of said attributes, at least one of said attributes included in said defining relationships step.

4. (Original) A method in accordance with claim 3, wherein each hierarchy defines a drill down path for accessing said database.

5. (Original) A method in accordance with claim 3, wherein a hierarchy contains one attribute.
6. (Original) A method in accordance with claim 3, wherein said act of defining said at least one hierarchy is independent of said database.
7. (Canceled)
8. (Original) A method in accordance with claim 1, wherein said database is a relational database.
9. (Original) A method in accordance with claim 1, wherein said dimension is utilized with an on line analysis processing (OLAP) system.
10. (Original) An application programming interface (API) comprising means for performing the method of claim 1.
11. (Currently Amended) A computer-readable storage medium having computer-executable instructions for improving data processing in connection with a database having restrictions therein, by performing acts comprising:  
  
defining a dimension comprising a plurality of attributes;

assigning each attribute to a respective column of said database having restrictions on each attribute therein;

defining relationships between said attributes, wherein said relationships are not subject to said attribute restrictions placed on said database;

defining new relationships between said attributes, wherein:

said new relationships are not subject to attribute restrictions placed on the database; and

said new relationships modify at least one relationship between said attributes;  
and;

accessing said database via said dimension.

12. (Canceled)

13. (Previously Presented) A computer-readable medium in accordance with claim 11, further having computer-executable instructions for defining at least one hierarchy comprising a sequence of attributes, at least one of said attributes included in said defining relationships step.

14. (Original) A computer-readable medium in accordance with claim 13, wherein each hierarchy defines a drill down path for accessing said database.

15. (Original) A computer-readable medium in accordance with claim 13, wherein a hierarchy contains one attribute.

16. (Original) A computer-readable medium in accordance with claim 13, wherein said act of defining said at least one hierarchy is independent of said database.

17. (Canceled)

18. (Original) A computer-readable medium in accordance with claim 11, wherein said database is a relational database.

19. (Original) A computer-readable medium in accordance with claim 11, wherein said dimension is utilized with an on line analysis processing (OLAP) system.

20. (Currently Amended) A system for accessing a database having restrictions therein, said system comprising:

a processor coupled to a storage device, said storage device comprising said database;

a first definition component for defining a dimension comprising a plurality of attributes;

an assignment component for assigning each attribute to a respective column of said database;

a second definition component for defining relationships between said attributes, wherein said relationships are not subject to said attribute restrictions placed on said database, said second component defining new relationships between said attributes, wherein:

said new relationships are not subject to attribute restrictions placed on the database; and

said new relationships modify at least one relationship between said attributes;  
and;

an access component for allowing access to said database via said dimension.

21. (Previously Presented) A system in accordance with claim 20, further comprising:  
  
a third definition component for defining at least one hierarchy within each dimension, each hierarchy comprising a sequence of attributes, at least one of said attributes included in a relationship defined by said second definition component.
22. (Original) A system in accordance with claim 21, wherein each hierarchy defines a drill down path for said access component.
23. (Original) A system in accordance with claim 21, wherein a hierarchy contains one attribute.
24. (Original) A system in accordance with claim 21, wherein said third definition component defines said at least one hierarchy independent of said database.
25. (Canceled)
26. (Original) A system in accordance with claim 20, wherein said system is utilized with an on line analysis processing (OLAP) system.

27. (Currently Amended) A system for accessing a database having restrictions therein, said system comprising:

means for defining a dimension comprising a plurality of attributes;

means for assigning each attribute to a respective column of said database;

means for defining relationships between said attributes, wherein said relationships are not subject to said attribute restrictions placed on said database;

means for defining new relationships between said attributes, wherein:

said relationships are not subject to attribute restrictions placed on the original database; and

said new relationships modify at least one relationship between said attributes;  
and;

means for accessing said database via said dimension; and

means for defining at least one hierarchy comprising a sequence of said attributes.

28. (Canceled)

29. (Original) A system in accordance with claim 27, wherein said at least one hierarchy is defined independent of said database.

30. (Original) A system in accordance with claim 27, wherein said system is an on line analysis processing (OLAP) system.

31. (Original) A system in accordance with claim 27, wherein said means for defining a dimension, means for assigning, means for defining relationships, means for accessing and means for defining at least one hierarchy comprise at least one application programming interface (API).

32. (Previously Presented) A computer-readable storage medium in accordance with claim 11 comprising a data structure comprising:

the a dimension comprising the a plurality of attributes, wherein each attribute is bound to a column in a database; and

a logical structure indicative of relationships between said plurality of attributes, wherein said relationships are not subject to said restrictions placed on said database.

33. (Previously Presented) A data structure in accordance with claim 32, said data structure further comprising at least one hierarchy comprising a sequence of attributes, at least one of said attributes included in said defining relationships step.

34. (Original) A data structure in accordance with claim 33, wherein each hierarchy provides a drill down path for accessing said database.

35. (Original) A data structure in accordance with claim 33, wherein a hierarchy contains a single attribute.

36. (Previously Presented) A data structure in accordance with claim 33, wherein each sequence is defined independent of said restrictions associated with said database.

37. (Previously Presented) A data structure in accordance with claim 32, wherein said logical structure is defined independent of said restrictions associated with said database.

38. (Original) A data structure in accordance with claim 32, wherein said database is a relational database.

39. (Original) A data structure in accordance with claim 32, wherein said database is capable of being utilized with an online analytical processing (OLAP) system.

40. (Currently Amended) A method for retrieving data from a database having restrictions therein, said method comprising:

receiving a data retrieval request including a dimension, wherein:

said dimension includes a plurality of attributes;

each attribute is assigned to a respective column of said database; ~~and~~

at least one relationship ~~relationships~~ between said attributes ~~are~~ is defined, wherein;

said at least one relationship[[s]] ~~are~~ is not subject to said attribute restrictions placed on said database;

new relationships are defined between said attributes; and

said relationships are not subject to attribute restrictions placed on the original database; and



said new relationships modify at least one relationship between said attributes;  
and;

retrieving said data from said database via said dimension.

41. (Original) A method in accordance with claim 40, further comprising:  
providing said retrieved data in response to said data retrieval request.
42. (Previously Presented) A method in accordance with claim 40, said data retrieval request further including at least hierarchy comprising a sequence of said attributes, where at least one of said attributes is included in the said at least one defined relationship.
43. (Original) A method in accordance with claim 42, wherein each hierarchy provides a drill down path for accessing said database.
44. (Original) A method in accordance with claim 42, wherein a hierarchy contains a single attribute.
45. (Previously Presented) A method in accordance with claim 42, wherein each sequence is defined independent of said restrictions associated with said database.
46. (Previously Presented) A method in accordance with claim 40, wherein said relationships between said attributes are defined independent of said restrictions associated with said database.

**DOCKET NO.:** MSFT-1587/302202.1  
**Application No.:** 10/603,037  
**Office Action Dated:** August 23, 2007

**PATENT  
REPLY FILED UNDER EXPEDITED  
PROCEDURE PURSUANT TO  
37 CFR § 1.116**

47. (Original) A method in accordance with claim 40, wherein said database is a relational database.

48. (Original) A method in accordance with claim 40, wherein said database is capable of being utilized with an online analytical processing (OLAP) system.